

Appl. No.: 09/853,103
Amdt. filed December 17, 2004
Reply to Office action mailed August 17, 2004

REMARKS

Upon entry of this amendment, claims 1-5, 7-21, 24, and 25 will be pending. Claims 1, 17, and 24 are currently amended. The amendments are supported in the specification at, e.g., page 6, lines 4-8 and 23-24 and at, e.g., page 7, lines 5-6, and introduce no new matter. Claims 3, 12, and 19 are amended to correct a typographic error. Claims 6, 22, and 23 are canceled without prejudice.

CLAIM REJECTIONS

The Office Action rejected pending claims 1, 2, 4-11, 13-18, and 20-25 under 35 U.S.C. § 102(a) as being anticipated by US patent no. 6,000,016 to Faigon et al. ("Faigon") contending that this reference discloses all the elements of the rejected claims, and in particular "message keys" and "message relation keys".

Applicants traverse this contention, and also traverse the Examiner's contention that in Faigon one monitoring agent-type entity executes or runs on, that is "is associated with", each monitored node. "Message keys", "message relation keys", and "agents" are clearly defined and illustrated in this application, and the relevant aspects of Applicants' invention are correctly characterized as follows.

"Message keys" and "message relation keys" are data structures generated by "agents". A monitored node hosts at least one "agent" that receives "monitoring-relevant events", such as SNMP traps, CMIP notifications, TL1 events, and generates the "key" data structures from information provided by "events". See the specification at, e.g., page 5, lines 27-28 (examples of events); and page 6, lines 4-8 (definition of "agent" as used in this application). "Message keys" comprise selected data concerning "event" characteristics, while "message relation keys" comprise patterns used subsequently to match different "message keys" that refer to the same system entity or object. See the specification at, e.g., page 6, lines 23-27 (defining the contents of "message keys"); and page 12, lines 26-29 (defining the contents of "message relation keys").

One "message key", and optionally one "message relation key", is associated with each monitoring-relevant "event", and comprises selected data fields extracted from each event and re-

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assembled into the "keys". Extraction and re-assembly of data field is controlled by a pattern. See the specification at, e.g., page 8, lines 20-23 (definition of "message key" and "message relation key" as used in this application); and page 12, lines 7-9 (examples of "key" construction). Figs. 2 and 3 clearly illustrate how these data structures are assembled from information extracted from "events" according to patterns.

In more detail, "message keys" and "message relation keys" are event-related. One "message key" and optionally a "message relation key" is generated for single "events" (deemed relevant for monitoring purposes). Thus, these "key" data structures are "event-related". After generation, "message keys" with optional "message relation keys" are sent in individual messages to a monitoring server system. See the specification at, e.g., page 6, lines 13-17 ("key" generation); and page 13, lines 7-8 ("key" transmission.). Therefore, each "message key" and optional "message relation key" derives from, or is related to or associated with, a single "monitoring-relevant event". Transmissions to the monitoring server system preferably each include a single "message key" and optional "message relation key", and therefore also derive from, or are related to or associated with, single events, and are thus also "event-related".

The Applicants respectfully submit that Faigon fails to disclose, *inter alia*, "message keys", "message relation keys", and "agents" executing on monitored nodes as understood in this invention, and consequently cannot anticipate the present invention. A careful review of the sections of Faigon cited by the Examiner, and indeed of the whole of this reference, reveal no more than the following disclosure relevant to this application.

Faigon discloses "trap servers" and/or "fault correlators" that receive network events, particularly SNMP traps. See Faigon at, e.g., col. 6, line 30 to col. 7, line 14. "Trap servers" store and forward traps to "fault correlators"; and "fault correlators" receive traps and compare received traps with a database of stored traps. Faigon's "trap servers" and "fault correlators" cannot be the "agents" of this invention, at least because Faigon's "trap servers" and "fault correlators" execute only on selected network devices. See Faigon at, e.g., col. 6, lines 32-36 and 52-53; col. 8, lines 26-28. In contrast, individual copies of the this invention's "agents" are hosted on each monitored network node. These "agents" process local "events" locally.

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Therefore, "trap servers" and "fault correlators" are different from the "agents" of this invention in at least this respect.

Importantly, although "fault correlators" do generate "meta traps", Faigon's "meta traps" are not "message keys" or "message relation keys". Faigon describes "meta trap" generation as follows:

When a fault condition is triggered by matching of the predefined rules as discussed above, by the occurrence of a specified number of traps of a specified type of fault have occurred within a certain number of times within a given time interval then a meta trap object is created and sent to fault recorder 323.

Faigon at col. 13, lines 24-29; see also Faigon at, e.g., col. 13, lines 24-54; and Fig. 15 (illustrating conditions for "meta trap" generation). First of all, Faigon's "meta traps" are not "event-related". Instead, each "meta trap" is associated with and summarizes multiple events or faults all occurring within a limited time duration in a single device. In contrast, this invention's "key" data structures are "event-related" by being associated with a single "event". Also nowhere does the Faigon reference describe extracting data from a single event and then re-assembling the extracted data into a single event-related message, as this invention's "key" data structures are generated.

Finally, Faigon's event correlation is performed inside the "fault correlators" in some rule-based manner with rules presumably stored in or with the "fault correlators". See Faigon at, e.g., col. 7, lines 1-4. Instead, the present invention uses patterns, that is the "message relation keys", to guide "message key" correlation. Then "message relation keys" are provided to the "monitoring server system" in the same message as the "message key" itself. Faigon, on the other hand, has no description of correlation patterns transmitted to the "fault correlators".

In summary, Applicants respectfully submit that the pending claims are not anticipated, because Faigon does not describe each and every limitation of the claims, *inter alia*, "message keys", "message relation keys", and "agents". Applicants respectfully request that the present rejections be withdrawn.

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The Office Action also rejects claims 3, 12, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Faigon combined with US patent no. 6,253,243 to Spencer et al. ("Spencer") contending that Spencer teaches use of wildcards, which was not taught by Faigon. It is respectfully requested that this rejection also be withdrawn since Faigon does not anticipate claims 1, 10, and 17 which are the parents of claims 3, 12, and 19.

CONCLUSIONS

In view of the foregoing, Applicants respectfully submit that all the Examiner's objections and rejections have been addressed and that all of the claims in the present application are allowable. Accordingly, Applicants respectfully request that the claims be reconsidered and passed to allowance.

12/16/04
Date

Respectfully submitted,

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